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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/599,018	06/21/2000	Hiroto Matsuo	P107336-00000	6469

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EXAMINER

SCHECHTER, ANDREW M

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 03/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/599,018

Applicant(s)

MATSUO ET AL.

Examiner

Andrew Schechter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Okajima et al.*, U.S. Patent No. 5,334,993.

Okajima discloses a display device comprising a light source [111], a light guide plate [13], a non-emitting display device [10], and a holder for housing the above, wherein the holder includes a first holder [113] having a back surface covering the back of the light guide, a second holder [112 and 12] having an opening for the display area and formed dividably from the first holder, and a light source housing chamber [see Fig. 4] for housing the light source, with an opening, formed by combining the first and second holders.

It might be argued that the second holder in the present specification is a single piece, while the second holder in *Okajima* is in two parts. It does not appear to the

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examiner that the scope of the claim language excludes this possibility (if the applicants believe otherwise, they should bring this to the attention of the examiner.) In that event, *Okajima* would not teach a single-piece second holder; however, it has been judicially determined that it would be within the skill of one of ordinary skill in the art to make the two pieces integral [*in re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965), for example], motivated among other reasons by the desire to reduce the number of parts and number of manufacturing steps. Claim 1 is therefore unpatentable.

The first and second holders have first and second housing areas, so claim 2 is also unpatentable.

The first and second holders are formed with resin [col. 2, lines 58-62], so claim 3 is unpatentable. (Part of the second holder is made of metal, but the claim language is open-ended so it does not exclude other materials in addition to the resin.)

The second holder includes a shading piece [see Fig. 4] facing the emitting surface of the light guide, in a periphery of an incident surface, so claim 7 is unpatentable.

The back surface of the first holder is formed to be a reflecting surface [col. 3, lines 1-5], and there is no reflecting sheet provided between the light guide plate and the back surface, so claim 8 is unpatentable.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Okajima* as applied to claim 1 above, and further in view of *Horiuchi et al.*, U.S. Patent No. 5,729,310.

The additional limitation of claim 4, a flexible connecting part connecting the two pieces of the divided holder, is not disclosed by *Okajima* (which discloses instead a screw connection). *Horiuchi* does disclose a flexible connection [see Figs. 5-6, parts 3 and 10] in an analogous context. It would have been obvious to one of ordinary skill in the art to use this kind of flexible connection for the holder parts in *Okajima*, motivated among other reasons by the teaching of *Horiuchi* that this allows the device to be “easily assembled”, so that it is “thus possible to simplify the manufacturing process, reduce the cost, and provide a light apparatus with excellent maintainability.” [col. 3, lines 1-7] Claim 4 is therefore unpatentable.

5. Claims 5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Okajima* as applied to claim 1 above, and further in view of *Nagakubo et al.*, U.S. Patent No. 6,313,891.

The additional limitation of claim 5, a reflecting surface on the inner surface of the housing chamber, is not explicitly disclosed by *Okajima*. *Nagakubo* does disclose this in an analogous context [see 19b in Fig. 4, col. 9, lines 34-37], and it would be obvious to one of ordinary skill in the art to do the same in *Okajima*, motivated among other reasons by *Nagakubo*’s teaching that this improves “the reflection efficiency of the light irradiated from the backlight source”. Claim 5 is therefore unpatentable.

The additional limitation of claim 9, that the back surface of the first holder is formed in a predetermined shape so as to control light reflection and diffusion, is not disclosed explicitly by *Okajima*. The examiner interprets “formed in a predetermined shape so as to control light reflection and diffusion” as including printed dots on the

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reflector, which have some thickness and therefore change the "shape" of the back surface, and are furthermore widely used to affect the reflection and diffusion of the light. *Nagakubo* does disclose this in an analogous [see 19e in Fig. 4, col. 9, lines 45-50], and it would be obvious to one of ordinary skill in the art to do the same in *Okajima*, motivated among other reasons by the desire to have a "light quantity control portion" which improves the evenness of the light reflected from the back reflector. Claim 9 is therefore unpatentable.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Okajima* as applied to claim 1 above, and further in view of *Yamada et al.*, U.S. Patent No. 5,704,703.

The additional limitation of claim 9, that the back surface of the first holder is formed in a predetermined shape so as to control light reflection and diffusion, is not disclosed explicitly by *Okajima*. If the applicants were to interpret "formed in a predetermined shape so as to control light reflection and diffusion" in a manner which excludes printed dots (which they should bring to the attention of the examiner), then the examiner notes that *Yamada* discloses a reflector in an analogous context formed with protrusions [see 313 in Fig. 41, col. 9, lines 45-50], and again it would be obvious to one of ordinary skill in the art to do the same with the reflector back surface in *Okajima*, motivated among other reasons by the teaching of *Yamada* that "an even luminance distribution can be obtained over the emission surface" [col. 22, lines 19-21] in this manner. Claim 9 is therefore unpatentable.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Okajima* as applied to claim 1 above, and further in view of *Kim*, U.S. Patent No. 6,016,175.

The additional limitation of claim 6, that the housing chamber includes a light source holding part, is not explicitly taught by *Okajima*. *Kim* does disclose a light source holding part (projecting parts 200, 201, see Figs. 9-11) which are formed as part of the frame (or "housing chamber" in the case of *Okajima*). It would have been obvious to one of ordinary skill in the art to form such light source holding parts are part of the housing chamber, motivated among other reasons by *Kim*'s teaching that this design is "simplified" and "a more stable construction", and that "there is no possibility of the position determiner breaking away from the frame". [col. 6, lines 39-50] Claim 6 is therefore unpatentable.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,905,550 to *Ohgami et al.* discloses another flexible connector connector two parts of an LCD housing.

U.S. Patent No. 5,886,759 to *Mashino et al.* discloses [see Fig. 13] what appears to be a back holder acting as a reflector with a pattern of protrusions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Schechter whose telephone number is (703) 306-5801. The examiner can normally be reached on Monday - Friday, 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Sikes can be reached on (703) 308-4842. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 746-4711 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

AS

Andrew Schechter
February 28, 2002

TOANTON
PRIMARY EXAMINER